

Jim Rafferty, N6RJ, SK

by Rich, WA9WYB

On June 13, 1993 Amateur Radio lost a good friend and tireless supporter with the passing of Jim Rafferty N6RJ.

Jim began his love affair with amateur radio as WA9UCE in 1967 in Illinois. After moving to California Jim upgraded and became N6RJ.

His avocation became his career when he joined Ham Radio Outlet, becoming a manager and ultimately Anaheim HRO Vice President.

On the air, Jim became well known to DXers and testers alike. He participated in numerous DXpeditions, and he gained a reputation as a fierce competitor in major DX contests.

For a time Jim was a member of the American Radio Relay League DX Advisory Committee.

Knowing Jim was to have a real friend. In the finest tradition of the circus, one call of "Hey Rube" would bring Jim's helping hand or sage advice

based on his experience.

Speaking as a friend and colleague, I know he will be sorely missed.

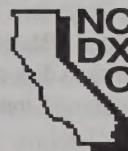
I'd like to join DXers and testers everywhere in offering heartfelt condolences to Jim's wife Shirley and to his lovely children.

Jim was laid to rest on June 18, 1993.

Garry Shapiro, N16T, encouraged Rich to write this. Thanks to both of you for troubling to provide the story for the DXer—ed.

DXer

N O R T H E R N
C A L I F O R N I A
D X C L U B



Mellish DXpedition Planned For September

by Murray Adams, WA4DAN

An international team of DXers plan to activate Mellish Reef in September. The confirmed dates for this major operation are September 19-28, 1993. Eight operators will participate and spend ten days on the reef. The Mellish Reef team are: VK4CRR, VK2BJL, VK2BEX, P29DX, V73C, WA4DAN, K5VT, and G3WGV.

Five HF stations and one six meter station will be active around the clock. The

operators plan to operate all bands, 160-6 meters, including WARC. Modes will be SSB, CW, and RTTY.

Monoband yagis will cover 10, 15, and 20 meters and WARC dual-band beam will cover 12 and 17 meters. The Mellish team also plans to put up a tribander, two Butternut verticals, a GAP 160-meter vertical, and a six-meter yagi.

Gerry Humphrey will captain *Nina Q 1*, a sixty-three foot schooner capable of

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N O R T H E R N C A L I F O R N I A D X C L U B

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President: George Allan, WA6O
Vice President: Garry Shapiro, NI6T
Secretary: Craig Smith, N6ITW
Treasurer: Dewey Churchill, KG6AM
Director: Bob Artigo, KN6J
Director: Jim Knochenhauer, K6ITL
Director: Louese Bloom, KA6ING

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Net Manager: Ralph Hunt, AG6Q
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W6TI Station Trustee Bob Vallio, W6RGG, transmits DX information at 2:00 zulu every Monday (Sunday evening local time) on both 7.016 and 14.002 MHz.

Club address: Box 608
Menlo Park, CA
94026-0608

The DXer is published Monthly by the Northern California DX Club and sent to all club members.

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General Meeting

The General Meeting was held June 11 at Harry's in Palo Alto, with Bob, KN6J, presiding.

Brad, K6WR, Asst. Director of the Pacific Division, reported:

- Sen. Inouye (D-HI), chair of the Senate Telecommunications Committee, has signed on as a sponsor of SB90.
- The chair and one seat on FCC are both vacant, awaiting presidential appointments.
- The Pacific Division Convention will be held in Concord on October 22-24.
- W9PRN, Central Division Director, is a silent key. Brad is now Board liaison to the Contest Advisory Committee.
- Brad announced his candidacy for Pacific Division Director.

Jim, W6CF, reported:

- Lou, K6TMB, is in El Camino Hospital with a heart condition.
- Eritrea: the 9ER1TA/TB operation may or may not count depending upon the "restart date" for Eritrea as a DXCC country.
- Pratas I. (BV9): DXAC has received an application for country status. The island is controlled by Taiwan. No vote has yet been taken on the application.
- Creation of an RTTY Honor Roll. The consensus of members present was favorable.
- Jim announced his candidacy for Pacific Division Vice Director.

Steve, N6ST, reported on "CT Madoke", a program that simulates CT running contest pileups on a DOS PC. To simulate more than one station calling, the program requires a Sound Blaster board. Steve will provide the S/W to any member sending him a formatted disk, a disk carrier, and sufficient return postage (put in a mailing lable addressed to yourself, too, to ease his task—*ed.*).

There were no first readings.

Second readings were held for NU6S, K6UO, N7STU, KI7B, and WA6GIN. All were elected to membership. The Life Member application of N6SSM was referred to the Board of Directors for action.

Dave, KI6WF, presented the Nominating Committee (KA6W, WB6WKM, KI6WF) slate for 1993-94 NCDXC officers and directors. All were elected by those members present. They are:

President:George Allan, WA6O
Vice PresidentGarry Shapiro, NI6T
SecretaryCraig Smith, N6ITW
TreasurerDewey Churchill, KG6AM
DirectorJim Knochenhauer, K6ITL
DirectorLouese Bloom, KA6ING

Bob Artigo, KN6J, becomes a Director as Immediate Past President.

The new slate takes office following the July meeting.

Roster Changes

New Members:

William O. (Bill) Hamlin, K6UO
20129 Beatty Ridge Road
Los Gatos, CA 95030
H: 408/354-8712

Timothy S. (Tim) Coad, NU6S
10292 Judy Avenue
Cupertino, CA 95014
H: 408/996-1572
B: 408/738-2888

Allen (Al) Citragno, WA6GIN
14301 Lora Drive
Los Gatos, CA 95030
H: 408/378-5221

Mark A. (Mark) Hansen, KI7N
1291 Vicente Drive #252
Sunnyvale, CA 94086
H: 415/969-5462
B: 408/522-3342

Robert (Robert) Brown, N7STU
1045 Delna Manor
San Jose, CA 95128
H: 408/971-1445
B: 510/623-9040

Changes and Corrections:

Albert C. (Al) Crespo, WR6R
add home phone number:
(510) 254-3233

N6SSM is Extra Class, not Advanced.

Mellish DXped from page 1

carrying six thousand pounds of DXpedition gear. Two dinghies aboard *Nina Q 1* will facilitate unloading and transporting gear to the reef.

Bouvet CD Offered

A compact disk recording of the entire Bouvet DXpedition has been offered by Robco Industries of Newark, New Jersey. Thrill to the sounds of "the burper," "the laser gunner," and the ever-present "police-men," as you expand your vocabulary. The disk will be distributed exclusively through HRO.

from "The Clod Harris DX Bulletin," Special Hamvention Edition—a flyer produced by persons unknown and passed out at the 1992 Dayton Hamvention.

All official documentation, including DOTC license and landing permission, have been received. Also, the ARRL DXCC Desk has given preliminary approval pending DXpedition completion and receipt of travel documents and extracts from the ship's log.

Donations are being sought worldwide—from DX foundations, clubs, and individuals, to help offset the projected DXpedition cost of \$30,000. Please direct donations or requests for more information to WA4DAN or VK4CRR.

G4DYO is a donation collection point for Europe. Checks should be made out to "1993 Mellish Reef DXpedition." Please include an SASE so we can mail you an update prior to the departure for Mellish Reef. Thank you!

Murray D. Adams, WA4DAN
1993 Mellish Reef DXpedition
403 East 14th Street
Greenville, NC 27858

Bill Horner, VK4CRR
1993 Mellish Reef DXpedition
26 Iron Street Gympie, QLD 4570
Australia

Vacuum Tube Cross-Reference Software

by Jim Johnson, N7XTY

I have written a vacuum tube cross-reference program for DOS computers that I am offering free of charge. If you would like one, just send a blank, formatted diskette, and a self-addressed, stamped disk mailer.

Send your disks (360k, 720k, 1.2 Meg or 1.44 Meg) to: Jim Johnson, N7XTY, Box 6352, Kennewick, WA 99336-0352

from the January '93 Silicon Valley Emergency Communications System (Santa Clara Valley, CA) "Repeater"—Don Gaubatz, W6GJF, Editor

Computer Man

by Hal Turley, KC8FS

Man is wise in many ways;
He teaches and he tutors.
If only we could program him
To be more like computers,

The world might be a better place,
Without the graft and greed
That seems to be inherent,
Within the human breed.

We might leave out the cruelty,
The need to criticize,
And wouldn't it be nice, my friends,
To leave out all the lies?

The only fault we find with this,
No matter how we try:
It seems our genius fails us;
Sometimes computers lie.

But do not blame that grand machine.
We each must understand,
The trash that comes to most of us,
Comes from the mind of man.

So wouldn't it be very nice,
And quite a bit less damning,
If we could slide a disk in man
And thereby reprogram him?

from the May '93 Kanawha ARC "Splatter"—Hal Turley, KC8FS, Editor

Can a DXer Live With Fear of Heights?

by Warren E. Berbit, K2UVV

I will reveal the moral of the story first: When working on towers and antennas, know your limits and stay within them. Be conservative. Never let pride and exuberance push you into unknown territory.

I have been acrophobic (afraid of heights) all my life. In the log of the Statue of Liberty around 1951 you could find me listed as the first person to walk all the way down from the top backwards! I couldn't bear looking down.

I did antenna work on the roof of a former residence, but had to wait three hours for the sun to set before I could get myself back down the ladder. I had conquered this, more or less, with my current tower.

That is, until the end of last summer when, at about 25 feet on the way down I lost all strength in my legs. I clung there with just my arms, while my legs shook uncontrollably. Their loud banging against the tower brought my son out to investigate. When he saw the situation, he started screaming. That brought me out of it just enough so I could lower myself to the ground—by arm strength alone.

So I purchased a ladder that almost reached the work platform atop the fixed section of my tower. I theorized the ladder would add to my confidence, even though I still had to climb a small section of tower and swing over to the platform.

I installed the ladder and went to the top of it many times. But I could not get myself beyond it. All fall and winter the ladder sat there mocking my weakness.

In the spring, I returned from the '93 Dayton Hamvention re-enthused about ham radio. When ideal antenna weather dawned on a Sunday, I had one thought: "You are going to repair that damned rotator today, no matter what!" I stalled until late afternoon, rechecking the bucket of tools on the pull-up rope maybe ten times. I put a radio in, to listen to a ball game, and a towel to obscure my view through the open grid deck of the platform—anything to divert my mind.

My sons tired of waiting and disappeared into the house. Finally I climbed up with no

one around (dumb move). I was crouched, pulling the bucket of tools over the railing, when it happened. I suddenly felt light headed and weak of limb. I couldn't straighten up or hunker down and I could think of nothing but getting down.

But I couldn't move. I called for help, softly at first, then louder and louder—panic setting in. My 160-pound mastiff came out. She sat down and watched for an hour while I called and called. Our black cat came out too, saw nothing of interest, and went back in. After about ninety minutes, my older son heard me. He climbed out a window on the second floor and stood on the roof nearest the tower trying to coax me down.

No luck. I told him to call the police. By the time he came out again, a siren blared. I made a modest joke: "For whom the bell tolls; it tolls for me." He said, "No way! I didn't tell them to come." Not wishing to share his father's humiliation, he gathered the dog and retired into the house. And true to his lights, my younger son came out to enjoy the show.

Soon red lights flashed from an ambulance, two EMT units, two police cars, a hook and ladder, a cherry picker, and a climbing team van. Volunteers arrived in their own cars too. There were emergency vehicles all along the road and on my driveway.

Though 300 feet from the road, I could see people coming from their houses, curious why all the emergency vehicles were gathering. I felt utterly appalled.

The volunteers and experts gathered at the base of the tower. We discussed what to do—me from on high and they safe on the ground below.

The climbing team wanted to lower me by rope and pulley. The cherry picker operator said his machine was brand new and he'd like to try it. The hook and ladder guy wanted to bring his machine up the driveway. There was even talk of inflating that giant, jumping thing.

The police officers were silent. In their place I would have been thinking, "Shoot the dumb SOB down."

I could take no more. "I'm coming down," I screamed.

They screamed louder, "Don't!"

But down I came, light as a feather. I don't know how I did it; I can't remember climbing or clinging. I just remember the tremendous relief I felt when my feet hit the ground. I apologized immediately, thanked everyone, and asked them to leave as quickly as possible.

I ran inside, locked the house, shut the windows and hid. The Mayor called (I am the Village Attorney). I explained the situation rather curtly. Then a neighborhood kid called for his parents. The next day, my father-in-law called. A friend of his had heard of the event on a scanner.

I watched the newspaper in dread for a week—afraid of finding my story. But the paper never ran it.

I swear I will never again climb that damn tower. I will swallow my pride and ask for help—or hire someone. I learned this lesson the hard way: know your limits and stay within them. Breaking that rule could have made me a silent key.

The rotator still doesn't work. Maybe God doesn't want me in the pile-ups!

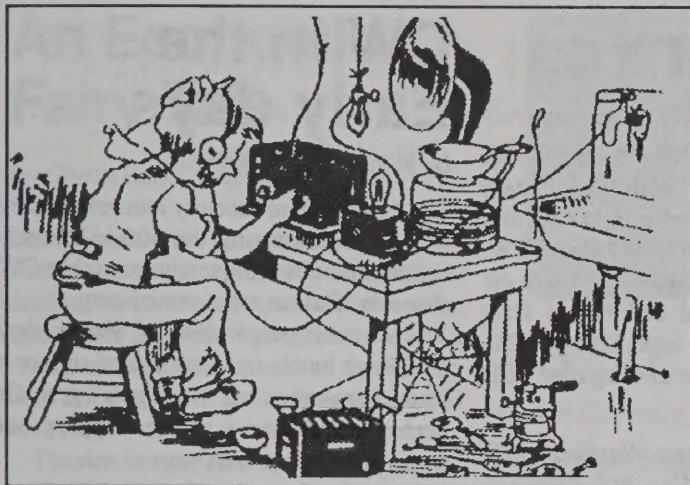
from the May '93 North Jersey DXA "NJDXA Newsletter"—Ron Levy, K2AIO, Editor

Keyboard Prayer

Our program, which art in memory,
Hello be thy name.

The O/S come,
Thy command be done,
On the printer as it is on-screen.
Forgive us this day or I/O errors,
As we forgive those
Whose software offends us.
Lead us not unto frustration
And deliver us from power surges,
For thine is the algorithym,
The application,
And the solution—
Looping forever and ever.
Return.

from the May '93 Indiana County RC "The Sine of the Times"—W3FVU Editor



from the Feb. '93 Arlington ARC (TX) "AARC Lite"—Scott Cashel, KB5UNV, Editor

You've Come A Long Way, Lady !

by Gary Hollier, KA5HLC

When I first heard about the "codeless Technician" license class, I was indeed appalled. I thought the integrity of amateur radio was on the line. I believed the code was the protective barrier that separated the dedicated hobbyist from the riffraff.

But now I admit my mistake; my fears were groundless. I have yet to hear the likes of Billy-Bob Redneck, aka "The Love Machine," desecrating the airwaves with recycled CB jargon. On the contrary, what I have heard is the delightful voices of new lady hams keying up with style, grace, and utmost professionalism. It reminds me of the first time I saw color television after years of watching black and white sets.

The only downside is my envy of the husband-and-wife teams I hear enjoying ham radio together. It seems hard these days to find a hobby that can be enjoyed equally by both marriage partners. But ham radio is achieving just that and even little junior or junior miss can get in the act.

So if your spouse hasn't yet experienced the excitement of ham radio, let her listen to your local family repeater when other couples are on. That might provide all the incentive she needs to sign up for your club's Novice class.

from the April '93 Cajun Electric ARC (New Roads, LA) "C.E.A.R.C. Journal"—Gary Hollier, KA5HLC, Editor

Everything takes longer than you thought it would, costs more than you planned spending, and has problems about which your friends will say, "How come you didn't know?" —Ann Landers

from the June '93 Sierra Intermountain Emergency RA "SIERA"—Dorothy Uebele, N7MXA, Editor

'twas the Night After Dayton

by Harry Barnett, W8SWD

'Twas the night after Dayton and all through the net
Not a soul could stop talking 'bout what he did get.
New goodies were placed in the hamshack with care,
With high expectations next time on the air.

Ma in her kerchief and I in my cap
Were settled at last for a much needed nap.
Tonight as you snuggle down into your bed,
Will visions of ham gear still dance in your head?

Last Thursday A.M. there arose such a clatter,
I tuned the repeater to hear all the chatter.
When what to my wondering ears should appear,
But a crazy assortment of anticipation and cheer.

A moment of listening and it became clear,
That the weekend of weekends was finally here.
"Come on gang!" was the shout, up to the heavens,
"We'll rendezvous at the nearest Bob Evans."

They filled their tummys and went out the door.
And down to Dayton they charged with a roar.
From all over the country folks gathered 'round,
Like an army of ants descending on town.

The Hara Arena was all abuzz,
With everyone doing what everyone does.
Dealers and hawkers were everywhere seen,
Hoping all hamdom would part with its green.

Kenwood and Icom, Alinco and Yaesu,
With outstretched hands to receive a peso.
Your ears were attacked by the terrible racket,
From sellers of "ritty," AMTOR and packet.

It takes self-control to continue your way,
Through sellers of ham gear—when they say,
"I'll make your shack a place of great splendor,
If you'll cross my palm with some legal tender."

In the flea market too were goodies galore,
The likes of which I had not seen before.
I'll never forget it, of that I'm quite sure,
And you know, if I can, I'll come back next year.

from the May '93 Milford ARC (MI) "Collector & Emitter"—Kevin Cagney, N8SMD, Editor

Experience is a hard teacher. She gives the test first, and then the lesson.

from the May '93 Delaware-Lehigh Valley ARC "W2OK Corral"—Clarence Snyder, W3PYF, Editor

World's Youngest Ham

(Compiled from various News Sources)

Jane Marie Thomas, daughter of Melissa Thomas, AA6TD and Steve Thomas, N6ST is the world's youngest ham, her callsign, KI6KID, having been issued before she turned 4 months of age.

A photo submitted by Steve shows six-day-old Jane Marie communicating in CW. According to Steve, "She could send CW only slowly at that age, but was up to 20 wpm by the end of her second week."

In CW conversations with her family, she shows remarkable understanding of the world around her. When three weeks old, she passed the Extra Class tests. The written part had to be given in CW, of course.

Now 16 months old, Jane Marie—in an exclusive interview with *The Totem Tabloid*—expressed interest in DXing and contesting. In her usual crisp 28 wpm CW, she said, "DXing is my passion. I sent off for my DXCC award before my first birthday and, with any luck, I'll be on the Honor Roll by the time kindergarten rolls around."

from the April '93 *Western Washington DX Club "Totem Tabloid"*—Jack Fleming, WAØRJY, Editor (Jane Marie's father, N6ST, edits the *Northern California DX Foundation Newsletter* and his mother, AA6TD, is treasurer of the *Northern California DX Club*)

CW in the Early days

by Wayne thalls, KB6KN

The Coast Guard recently announced they will stop monitoring the 500-kHz international distress frequency and other CW channels. This set me to reminiscing.

When most people think of wireles, they envision a lonely operator aboard ship or a young ham operating "homebrew" gear. Or perhaps some see a soldier tapping out secret messages in wartime.

But radiotelegraph had many other uses. Much public correspondence passed between countries by wireless, as did international news stories. Domestic applications included a California CW net that disseminated agricultural market data.

In the thirties police departments throughout the country installed radiotelegraph equipment and state police organizations became major users. Michigan, Illinois, Missouri, Ohio, West Virginia, Kentucky, and Indiana each had twenty or more stations. I served with the Indiana State Police, operating on their net during the forties and fifties.

There were also municipal police CW stations—Los Angeles, Phoenix, Olympia, Little Rock, Fort Worth, Milwaukee, Des Moines, New Orleans, and Birmingham among them. The law enforcement agencies operated on nine assigned frequencies in the 2.8, 5.9, and 7.9 MHz range.

I earned my first and only citation during one lonely night's watch. After exchanging traffic with another station, I welcomed the operator back from his vacation—a dozen words, perhaps, at 35 wpm. Things must have been slow at the FCC monitoring station too. We both received "pink slips" for our "personal communications on a commercial frequency."

The Coast Guard notwithstanding, CW is still my favorite mode on HF.

from the March '93 *Santa Cruz County (California) RAC "Short Skip"*—KB6KN Editor

Freedom and Antennas

by Robin Moseley, WA3T

Last month, my wife and I were in England seeing family members we would never see without crossing the Atlantic.

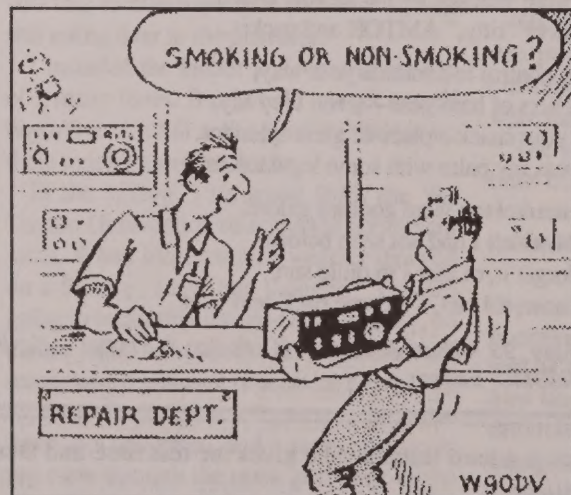
We also walked our old haunts and toured parts of England we had never seen. The English countryside is as beautiful as ever. We walked through villages almost unchanged for fifty years or more—thatched cottages, streams and ponds, the picture postcard bit!

But this comes at a price. Villages remain so beautiful because all building in England is tightly controlled. You can buy land within the boundaries of a town or village, but you might not be allowed to build on it. And if you are lucky enough to get permission, you would still be subject to tough, extremely detailed restrictions on size and appearance. You could buy a picturesque cottage, but you wouldn't be allowed to add a garage or an extra bedroom.

It's an interesting exercise in community versus individual rights. The countryside remains beautiful for all to enjoy at the expense of individual freedom.

The control affects the ham community. You rarely see a ham antenna, because all proposed antennas need "planning permission."

It's not like getting a building permit here. The visual impact of the proposed antenna will be determined by the local government, with input from neighbors and abutters. Height, size, and location all become subject to public debate, and the



from the Fall '92 *QCWA Journal*, via the April '93 "10-10 International News"—Chuck Imsande, W6YLJ, Editor

Critics

They never raised a statue to a critic.

—Martha Graham

continued on page 11

An Economic Fairy Tale

by Glenn Ruud, KAØYNY

Once upon a time an American aerospace company and an Asian rice cooperative decided to have a competitive boat race. Both teams practiced hard and long to reach their peak performance and on the big day both felt they were as ready as they could ever be.

The rice farmers won by a mile.

The American team, discouraged by their loss, had to combat sagging morale. So corporate management decided the reason for the humiliating defeat had to be found.

They set up a "measurable improvement team" to investigate the problem and recommend appropriate corrective action.

The team soon learned the Asians had eight people rowing and one steering, while the American team had one person rowing and eight steering. So they promptly hired a consulting firm to study the matter and recommend a solution. Months and millions of dollars later, the consultants reported that too many people were steering and not enough rowing.

So the team's management structure was revised to three steering managers, four steering supervisors and one staff steering scientist.

An incentive program was initiated to improve the rower's performance. "In order to get him to work harder we must give him empowerment and enrichment," said the corporate managers.

In the next race, the American team lost by two miles.

Humiliated again, the American corporation laid off the rower for poor performance, sold all the paddles, cancelled all capital investment for new equipment, halted development of a new canoe, gave a performance award to the consulting firm, and distributed the money saved as bonuses to senior executives.

Of course, this is just a fairy tale.

from the April '93 *Amateur Radio Computer Club* (Minneapolis, MN) "Computeradio News"—KAØYNY Editor



TS-50: Super Little Rig

by Jim Carmody, NN5O

I have a penchant for small things, and I enjoy mobile HF and DXpeditioning. So the TS-50 in the *QST* ad looked to me like a lonely puppy in need of a home.

My unit came from HRO. The only accessory yet in stock was a 500-Hz CW filter, model YK-107C. Filter installation was easy, but it loomed huge over all of the surface-mounted stuff.

The TS-50 weighs 6.4 pounds, is 7-1/2 inches wide, by 2-1/4 high, by 10 deep. The mobile mike has up/down and user-programmable buttons. The rig comes with a sturdy mobile-mounting bracket.

The TS-50 delivers 100 Watts PEP on SSB, 50 Watts on CW, 25 Watts on AM, and 10 Watts on FM. The receiver covers 30 KHz to 30 MHz continuously, with 6-kHz filter on AM and 2.4-kHz on SSB and CW—unless you install the 500-Hz filter.

Two VFOs and a T/F-set function allow split operation. The 100 memories remember splits and modes, and you can scan between memories. The receiver has IF-shift, and can receive CW in either sideband. The noise blanker works.

Other features appear on two pop-up menus, when you hold down FLOCK for two seconds. The A-Menu controls power level, dial-light brightness, AGC, CW keying delay, offset, reverse sideband, FM sub-audible tone, and ten other items. The B-Menu covers code practice, meter peak-hold feature (nice!), memory protect, automatic power-off, mike gain and more—22 items total.

There are 27 other microprocessor-controlled functions that you can access from the four mike buttons—including antenna tune, noise blanker, RIT, T/F Set,

and AF Mute. I suspect the ten menu numbers not mentioned in the manual do some neat secret stuff.

The meat of any rig is how it operates. I am a long-time, dyed-in-the-wool ICOM fan born in Missouri, so I didn't expect much from a Kenwood receiver.

Yet this one is sensitive on all bands and resistant to strong adjacent signals. Though smaller than a rotor-controller, it seems the equal of my Icom 735 and may approach the performance of the much larger Yaesu FT-890. All reports on the rig's SSB audio have been superlative.

The TS-50 has a large heat sink and a quiet fan. It never gets hot.

I send CW with an MFJ keyer, though I could install a keyer inside; it isn't crowded!

Drawbacks? It has no VOX, no RF speech processor, and no internal keyer (but delay T/R works like VOX). The tuner is external but remote controlled (so you can put the tuner in back, near the antenna, where it should be anyway). The buttons are small; that comes with the territory.

I have heard people discussing mods already—transmit "tweaking" to 140 Watts, among others. (A bad idea if you don't have the use of a spectrum analyzer. Most of the extra power your Bird Wattmeter shows may be harmonics and intermodulation products. If so, you'll increase TVI and in-band spurious emissions, while making your signal *less* intelligible.—ed.)

The AM audio is good enough to justify the purchase as a shortwave radio alone. I found no glitches, no reason to fear the low serial numbers. The price: less than \$1100 with 500-Hz CW filter. I'm wildly enthusiastic and I don't leave home without it.

from the April '93 *Texas DX Society "The Bullsheet"*—Joe Staples, W5ASP, Editor

SWR and Excess Losses

by John Caplins, KC3LX

By far the most common antenna measurement among hams is standing wave ratio. Standing waves are periodic variations in voltage and current along a transmission line when the antenna isn't matched perfectly to the feedline.

SWR is just the ratio of the maximum voltage to the minimum voltage (or maximum current to minimum current—both numbers are the same). A perfectly matched system has no standing waves, so its SWR is 1:1. The worse the match, the higher the SWR.

When a feedline and load (in this case, an antenna) aren't perfectly matched, power reflects from the load and travels back toward the transmitter. The forward and reflected waves reinforce each other at some points along the line and partially cancel at others, creating the "standing" pattern.

Nothing at the transmitter end of a feedline can change the SWR in the line, but an antenna tuner can provide a match for a transmitter—allowing it to tolerate SWR in the feedline.

Despite claims to the contrary, a good transmatch loses little power. If that weren't true, it would overheat.

If you can "tune out" the SWR with a tuner, why bother to improve the antenna's match? High SWR causes extra feedline

loss, especially at high frequencies and in long feedlines. On 80 meters, the extra loss is negligible unless the feedline is hundreds of feet long, but when feedline losses are already high (more than one dB or so), high SWR can increase loss significantly.

Consider a 28-MHz antenna fed with 100 feet of new RG-58 coax. With 1:1 SWR it will lose 2.5 dB. Of 100 Watts from a transmitter, only 56 Watts reaches the antenna. A 6:1 SWR increases loss to 4.5 dB, and the antenna gets just 35 Watts. If the feedline isn't new, the losses may be worse. Obviously it's time to get a better feedline and a better match.

Few 80-meter antennas have low SWR all the way from 3.5 to 4.0 MHz. Most 40-meter antennas don't cover the whole band either. So even if your antenna is "flat" (has 1:1 SWR) at its design frequency, you may need a transmatch. Some antenna tuners reject harmonics—a nice feature. But most commercial ones don't; so don't throw out your low-pass filter until you're sure. And always put the filter between the transmitter and the transmatch—filters don't like high SWR.

If you wish to know more, try the *ARRL Handbook* and the *ARRL Antenna Book*.

from the September '92 *Southern Patuxent (Maryland) ARC 'Newsletter'*—re-edited by Dave Barton, AF6S

If power corrupts,
and absolute power
corrupts absolutely,
Go QRP!

by Thom Davis, K8IF

QRPers use the least power necessary. We reduce QRM and we reintroduce an element of the adventure of the early 200-meter days, when amateurs first demonstrated that low-power radio can get through.

Working 1,000 miles per Watt may not seem a big deal until you try five micro-Watts over a 10-mile path on 432 MHz. It wasn't easy. How about Australia with one Watt each way, for 12,000 miles per Watt?

QRPers have made DXCC using one Watt or less. One QRPer works the crowded 40-meter CW band running five Watts—while driving the Long Island Expressway. QRPers enjoy the special satisfaction of finding the people they work incredulous at the strong signal emanating from their flea-power transmitters.

But QRP involves more than artful low-power operation. The simplicity, compactness and portability of QRP gear attracts the experimenter and the homebrewer. It's common among QRPers to "roll your own"—probably more so than in any other facet of amateur radio except antennas. Some QRPers participate in emergency exercises. Some experiment with coherent CW. A few harness the sun, water, wind, or muscle energy to power their stations.

Active QRPers exchange ideas and views through their own publications, such as *QRP Quarterly*, the journal of the QRP Amateur Radio Club. *QRP Quarterly* covers experiments, homebrewing, operating events, contests, and other QRP activity.

The QRP motto is "Power is no substitute for skill." If that appeals to you, there is a place for you in the world of QRP.

from the February '93 *Butler County ARA "BCARA Tell-a-Ham"*—Gerald Wetzel, W3DMB Editor

New subscriptions to *QRP Quarterly* are \$12. Send your check to Mike Kilgore, KG5F, 2046 Ash Hill Road, Carrollton, TX 75007

Ham Had No Complaints

by Wayne Thalls, KB6KN

Have you heard people complaining that the code or written ham exams are too difficult, and should be made easier? A recent obituary in the San Jose Mercury, sub-titled "Trapped mind turned to writing, ham radio," that tells of Hal Johnson, KG6ZX, an SK this April, might give them pause.

A series of massive strokes years ago left Hal a quadriplegic who couldn't speak or eat, except through a tube. Even so, he learned to receive Morse code, and to type and send, using a head wand.

Seeking no waivers, Hal passed his Novice, Technician, and General Class exams. He copied the 13-wpm code flawlessly. Later he passed the Advanced exam as well.

He typed his 6,000-word autobiography, *Three Strokes and I'm Not Out*, himself—in two months, using the wand.

Now what are those people complaining about?

from the May '93 *Santa Cruz County ARC (CA) "Short Skip"*—KB6KN Editor

What to Tell the DX When You Jump In Out of Order

by Omri Serlin, AA6TA

The DXpedition station just called for South America only, but you are in California. What do you do? You throw in your last two letters anyway. But when he asks for your full call, you'll have to explain. Here are ten possible excuses:

1. I am having cancer surgery in a few minutes and I may not survive it.
2. I am pretty sure lightning will shortly strike my station.
3. I am mobile and am about to go into a 500-mile long tunnel.
4. My wife is in labor and I need to take her to the hospital right away.

5. I thought you said "Now, America."
6. The IRS audit guy is here and he's taking me to jail in a minute.
7. I learned about Brazil in high-school geography; surely that counts?
8. I once got a letter from Argentina; that counts, doesn't it?
9. The sheriff is here to repossess my rig.
10. It's way past my bedtime.

If the DX still refuses your QSO, say, "You are the worst lid I ever met. May a diseased camel soil your rig."

Believe me, he will remember you the next time he calls for W6's—if he ever again calls for W6's.



Tree Fishing

by John Taylor, W3ZID

I read KC3XO's piece in *QST's* Hints and Kinks, in which he describes casting a line over a tree with a fishing rod to put up field day antennas. It brought back memories of my attempts with bow and arrow—attempts that failed because my line was too heavy.

Wanting my 80-meter dipole to be higher than 30 feet at the center, I decided to go fishing in the trees.

For tackle, I chose a 5-1/2-foot Silstar medium-action graphite rod, and a reel made for 8- to 15-pound line. The reel had 150 yards of 15-pound monofilament line on it. I tied on a #3 bank sinker.

The sinker seemed a bit heavy, so I didn't "zing it." I just gave it a gentle lob upward into a tree. It sailed right out of sight. I found it the next morning hanging down through the limbs about 15 feet from where I stood when I made my cast.

I tied the monofilament to the middle of a long piece of 3/16-inch polyester rope—avoiding a knot, which might snag in the branches. The heavy line pulled up with surprising ease. It made a nice arc across several tree tops, not having any sharp bends. Whenever I felt resistance, I payed

out a few inches and then gave a yank. That made it slip right over the offending branch. Soon I was able to reel in my monofilament and hoist the antenna.

The method has promise. If I can do it, so can you; I'm not much of a fisherman. You might need skill in tight quarters or to hit exactly the right spot. But since I was content with anywhere in the trees, as long as it was high, my limited skills proved sufficient to the task.

Also, if you don't like a cast, you can always try again. Sinkers are cheap. So is monofilament line.

from the Penn Wireless Assn. (Langhorne, PA) October '92 'X-Mitter'—N3FEL, Special Edition Editor

For Beginning Cowboys

"Here's some good advice: Don't squat with your spurs on."

Paul Harvey on AM radio station KGO

By trying, we can easily learn to endure adversity—another man's, I mean.

—Mark Twain

Antennas & Trees

by Charlie Vorderberg, W0CCT

I think that I shall never see
An antenna lovely as a tree,
A beam whose lofty element
Against the wind oft-times is bent,
A tree that seeks DX all day
With TVI the price to pay,
A tree that may in summer wear
A folded dipole in her hair,
Upon whose bosom snow has lain
A lead-in wire, snapped with strain.
Doublets are made by fools like me
But only God can make a tree.

(with apologies to Joyce Kilmer)

Antenna & Tower

© 1992 David M. Barton, AF6S

Antenna's never big enough
Unless your tower's shakey.
Tower's never tall enough
Unless antenna's flakey.
'Cause signals large
Put you in charge
Of breaking pileups grand.

After storm winds blow,
If it's still up you'll know
It's time a bigger one's planned.

Better Mouse Trap

by Wayne Thalls, KB6KN

Would you like a way to keep your hand-held radio always within reach, in your car or shack? Radio Shack has the answer, a computer mouse holder just the right size for a modern HT. It comes with double-sided mounting tape. You can add foam rubber inside, if necessary. The "mouse pouch," Radio Shack part number 26-275, costs just \$2.49.

from the Santa Cruz ARC 'Short Skip'—
Wayne Thalls, KB6KN Editor

Free Mac DX Software

by Bob Stamper, K4CFV

I have converted RMinimufS, the original DX path-forecast program written for DOS machines, to the Macintosh. I also improved it, adding easy-to-use, Mac-style pull-down menus plus a series of more than 30 preset locations, both DX and stateside. I compiled the code into machine language, so it's fast as lightning. You can enter other locations not among the presets, if you know their latitudes and longitudes.

Best of all the software is free. Just send me a self-addressed, stamped disk mailer and a 720K disk (not a 1.44 Meg one) for a free copy along with documentation.

Send to: Bob Stamper, K4CFV, 12510 Shadowrun Blvd., Riverview, FL 33569

from the January '93 Silicon Valley Emergency Communications System (Santa Clara Valley, CA) "Repeater"—Don Gaubatz, W6GJF, Editor

Dead or Alive

A reward of 500 micro-Farads is offered for information leading to the arrest of Hopalong Capacity. The unrectified criminal escaped from the Weston Primary Cell, where he had been clamped in ions awaiting the Gauss Chamber.

He is charged with the induction of an 18-turn coil, Milli Henry, who was choked and robbed of her Joules. Armed with a battery of carbon rods, Capacity is a potential killer.

He is also charged with driving a motor over the Wheatstone Bridge and refusing to let the band pass. Be careful not to trap him, as in reactance he may offer series resistance.

The Electromotive Force spent the night searching for him in a magnetic field, where he had gone to earth. They failed to detect him and now believe Capacity returned ohm via the short circuit.

He was last seen riding a kilocycle with his friend Eddy Current who was playing *Ohm on the Range* on his harmonic.

from the Navy-Marine Corps MARS newsletter, 'The NCA 1/2 Watt.'

How to Report an Accident

by Marty, N8OVX

Amateurs provide a valuable service when they report accidents and emergencies. But sometimes they also cause confusion. Many police dispatchers don't understand that the amateur on the telephone can't talk duplex to the amateur at the emergency site.

Hams frequently try to give all the information in a single transmission. It works much better to give each of the "Five W's"—*who, what, where, when*, and if appropriate, *why*—in a short phrase—then stand by for confirmation before continuing.

Start by giving the *who*. Say you are a radio amateur calling on your radio. Then say "break." Why? *Break* means, in police language, "I still have more information but please acknowledge what I already said." The operator or dispatcher will prompt you, "Go ahead."

Report the *what* and maybe the *when*—a two-car accident that just happened, for example—next.

The *where* requires work on your part. Use a milepost if you can see one, or a nearby exit or road junction. Give the lane direction too—Interstate 75 southbound, a quarter-mile north of the route-35 interchange, for example.

Always say whether there are injuries and, if so, how many people may be injured.

Police urge you not to put yourself at risk in any situation. Just report the accident and let the police and other emergency-service people do their job.

from the February '93 Dayton (Ohio) ARA 'RF Carrier'—Jim Nies, WX8F, and Dave Morris, N8EEK, Co-editors

I Was a Teenage No-Code

by Steve, KM6YU

For a long time I had wanted to become a ham, but my high school electronics teacher and several people told me it was too hard—not worth the effort.

Last year, one month after I learned of the new no-code Technician Class license, I passed the test.

On the air, talking to my new friends on my VHF radio, I heard how easy it can be to learn the code with helpful other amateurs as teachers.

After some months of study—and practice, practice, practice—I passed the thirteen-wpm test and the General Class written exam. I was thrilled at my accomplishment, so I immediately began studying for my Advanced Class test, which I passed one month later.

I haven't started my quest for an Extra yet, and I'm not sure I can ever pass the 20-wpm code test, but I wouldn't change the requirements for that or any other ham test. The achievement is too great a joy to give up

by making it easier. Everyone who has done it knows the feeling I'm talking about.

Learning the code is not as hard as I thought it would be. At first I heard just a bunch of beeping, but with time it began to sound like letters and make sense.

So if you too are a no-code Tech, give it a try. After you pass, you'll take pride in knowing you have accomplished something significant.

It's a wonderful feeling going from no-code to know-code! Beep-beep and 73

from the December '92 Electronic Museum ARC (Los Altos, CA) 'EMARC Relay'—Mark Underwood, N6OCQ Editor

Are you as outraged as I am that a Saratoga High School teacher would discourage a bright student from doing something that might stretch his mind? Do you wonder, as I do, whether this is typical—a symptom of the general malaise of our public education system—or just an isolated case of a wrong-headed and poorly motivated teacher?—ed.

5A Expedition Update

by Romeo Stepanenko, 3W3RR/
AHØM

As you may know, we are preparing for a DXpedition to Libya (5A). Since the funds needed for the DXpedition had not been collected by the end of April, we were forced to postpone its start and continue our fund-raising activities. We evaluate the sum needed for the expedition as \$29,800. The total funds so far are \$11,200.

We want to go ahead with this DXpedition. We spent over a year preparing a detailed plan and getting to know the political situation of Muammar Quaddafi. Some of our information led us to believe a coup is possible there. If so, it might be difficult to launch another operation from 5A for a long time. We have developed serious leads within the Libyan government, but who knows how long they can be maintained? In a country like Libya, some of these people could disappear.

Our plan calls for immediate QSLing—beginning the day after we return. All cards will be printed before the expedition commences.

All four crew members are experienced operators, and some have already received Libyan visas, while others will be ready shortly. The operators are from Bulgaria, Ukraine and Russia. We expect to do a great job.

Because the 5AØA operation in 1983 was QRP, it mostly worked Europe. We shall give North America and Japan much attention, while working Europe on low bands, where they lack QSOs.

The three-element Yagi supplied by INDEXA is already in Egypt, awaiting

transportation to Tripoli. Here's the DXpedition plan:

- The crew arrives in Cairo by plane, rents a jeep, buys food, water, generators and fuel and drives along the coast to the border of Libya.
- We are being given two weeks to operate, and after completion of the operation all equipment and antennas might have to be left behind (Export duty far exceeds the value of the equipment).
- Our return trip takes us to Cairo on the ground. From there we fly to our respective homes.
- Every detail of the plan has been carefully attended to. Everything is coordinated.

Please note: Since QSL cards will be printed beforehand, we must receive all sponsors' logos for inclusion on the cards as soon as possible. There will be a commemorative medal for sponsors. If your organization is willing to help, we'd like you to forward the logo right away, using the fax number below. Kindly let us know if you are supporting this undertaking, even if it is going to take you some time to send in support.

Individual support is also needed. This is your DXpedition; you can make it happen. Please contact Edward Kritsky, NT2X (718) 284-4493 fax/phone. Address all correspondence to: 5A DXpedition, c/o Edward Kritsky, Box 715, Brooklyn, NY 11230.

from the May '93 North Jersey DXA "NJDXA Newsletter"—Ron Levy, K2AIO, Editor (Thanks to Ed Kritsky, NT2X, for forwarding this update to NJDXA)

Submissions to the DXer

by Dave Barton, AF6S

Of course I'll run appropriate material that's hand-written or typewritten. But receiving it on disk is easier and prevents typos. Advances in computer compatibility have allowed me to whatever text format your favorite software produces.

Any Macintosh can read a DOS 3-1/2-inch diskettes, but my new translation software, MacLinkPlus, can translate files from any common DOS/Windows or Macintosh software into any other. (Unfortunately, Apple-II, Commodore-64, and TRS-80 formats still resist compatibility.)

I can also read DOS 5-1/4-inch diskettes—even the old 360K ones—via a Daynafile accessory. Here are the file formats I can translate:

DOS/Windows:

Ami Professional 1.2, 2.0; FrameMaker MIF 2.0, 3.0; Lotus 1-2-3 .WKS files; Microsoft Works PC WP files; Microsoft Works Windows WP files; MultiMate, Multimate 4.0; Office Writer; Professional Write; Rich Text RTF; Windows Write; Word for Windows 1.0, 2.0; WordPerfect 4.2, 5.0, 5.1, WordPerfect for Windows; Wordstar, Wordstar 5.5, 6, 7; WPS-Plus VMS; XY Write III; ASCII; and PCX graphics files.

Macintosh:

Excel 2.0, 3.0; FileMaker; FrameMaker MIF 2.0, 3.0; MacWrite, MacWrite II; Microsoft Works WP 2.0, 3.0; MultiPlan Mac SYLK; PageMaker 3.0, 4.0, 4.2; Rich Text RTF; Word 3.0, 4.0, 5.0; WordPerfect Mac 1.0, 2.0, 2.1; WriteNow Mac; ASCII; and PICT and TIF Mac graphics files.

Graphics:

If you submit graphics created on or scanned by your computer, send it in its original format as well as in one of the formats listed above (if they aren't the same). I use Hijack on my 486 machine to convert PCX and other DOS graphics to Mac graphics formats. But send a good print, so I can scan it as a last resort.



Freedom

from page 6

neighbor with an RFI problem gets to take part! It's no wonder so many English hams settle for simple verticals!

We didn't realize how free we are, until we saw the restrictions others face. So treasure your freedom. Guard it well.

from the May '93 Delaware-Lehigh Valley ARC "W3OK Corral"—W3PYF Editor

Diplomacy: The art of letting

someone else have your way.—unknown

Michael, a ham from Seattle,
Tends to fumble the paddle.

The code he sends
Warps and bends
And throws you into an addle.

—AF6S 1993

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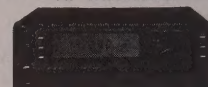
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